



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/584,191

06/23/2006

Takeki Shirai

062714

3849

38834

7590

04/28/2009

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP  
1250 CONNECTICUT AVENUE, NW  
SUITE 700  
WASHINGTON, DC 20036

EXAMINER

WAITS, ALAN B

ART UNIT

PAPER NUMBER

3656

MAIL DATE

DELIVERY MODE

04/28/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/584,191	<b>Applicant(s)</b> SHIRAI ET AL.	
	<b>Examiner</b> ALAN B. WAITS	<b>Art Unit</b> 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 March 2009 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Request for Continued Examination***

1. The request filed on April 10, 2009 for a Continued Examination (RCE) is accepted and a continued prosecution application has been established. An action on the RCE follows.

### ***Drawings***

2. The drawings were received on March 10, 2009. These drawings are acceptable.
3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “vertical two rows” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3, and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeki JP 04-164540.

Takeki discloses a similar device comprising:

Re clm 1, 6 and 8:

- a hollow track (25, fig 22) member having a slit (opening at top of 25, fig 22 ) extending in an axial direction thereof
- a movable member (33, fig 22) disposed inside the track member to be movable along the track member
- a drive mechanism (7, fig 22) [for moving the movable member along the axial direction of the track member]
- the track member has, in a section perpendicular to the axial direction of the track member, a guide portion (6, 4a, 4b, fig 8) [for guiding movement of the movable member]

- at least two extensions (22 and 25, fig 22) opposing to each other
- each of the extensions extending from the guide portion so as to cover the movable member (fig 22)
- the slit is formed between the opposing extensions (fig 22)
- a width of the slit of the track member is narrower than a width of the movable member (as shown in fig 22)
- the track member is formed with a rolling member rolling groove (4a, fig 8) extending in an axial direction thereof as the guide portion
- the movable member is formed with a loaded rolling member rolling groove (5a, fig 8) opposing to the rolling member rolling groove formed to the track member
- the movable member has both side surfaces (left and right sides, fig 8) to each of which vertical two rows of the loaded rolling member rolling grooves are formed (fig 8)
- a number of rolling members (6, fig 8) are interposed between the rolling member rolling groove of the track member and the loaded rolling member rolling groove of the movable member to be rollable therebetween (fig 8)

Takeki's hollow track member with a movable member does not have:

- an outer periphery of the track member has a substantially circular-arc shape in the section

Takeki teaches a hollow track member having:

Art Unit: 3656

- an outer periphery of the track member has a substantially circular-arc shape in the section (left and right track members of fig 23)

Since Takeki teaches two track shapes (box shape of figs 8 and 22 and the circular-arc shape of 23), it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute one track shape with the other to provide:

- an outer periphery of the track member has a substantially circular-arc shape in the section

to achieve the predictable result of supporting the movable member located in the track hollow track member.

Re clm 2:

- the single slit is formed at only one portion in a circumferential direction of the track member in a section perpendicular to the axial direction of the track member (as shown fig 23)

Re clm 7:

- the drive mechanism is provided with a screw portion (8, fig 8) formed to the movable member
- a screw shaft (7, fig 8) to be screw engaged with the screw portion
- the screw shaft penetrating the movable member
- the screw shaft as a center line coincident with a center line of an output shaft of a drive source rotating the screw shaft (fig 3)
- the drive source has an outer substantially circular shape in a section perpendicular to the axial direction of the track member (fig 3)

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takeki JP 04-164540 as applied to claim 1 above, and further in view of JP 61-29163.

Takeki discloses all the claimed subject matter as described above.

Takeki does not disclose:

- the track member is provided with a cover member expandable or contractible in the axial direction of the track member so as to entirely cover the track member in the section perpendicular to the axial direction of the track member
- a portion of the movable member projecting over the slit of the track member penetrates the cover member.

JP 04-164540 teaches:

- the track member is provided with a cover member (16, fig 1) expandable or contractible in the axial direction of the track member so as to entirely cover the track member in the section perpendicular to the axial direction of the track member (as shown in fig 1)
- a portion of the movable member (top of 14, fig 1) projecting over the slit of the track member penetrates the cover member

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Takeki and provide:

- the track member is provided with a cover member expandable or contractible in the axial direction of the track member so as to entirely

cover the track member in the section perpendicular to the axial direction of the track member

- a portion of the movable member projecting over the slit of the track member penetrates the cover member.

for the purpose of protection the shaft from dirty and debris.

### ***Response to Arguments***

7. Applicant's arguments with respect to claim 1, 2 and 5-8 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALAN B. WAITS whose telephone number is (571)270-3664. The examiner can normally be reached on Monday through Friday 7:30 am to 5 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Art Unit: 3656

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Alan B Waits/  
Examiner, Art Unit 3656

/Richard WL Ridley/  
Supervisory Patent Examiner, Art Unit 3656